

device 210 for execution thereof. The request 225 and 230 may be any transferable information that is received by the processing unit 205.

[0040] By way of example only, the request 225 may be an indication from the application 215. The indication from the application 215 may be retrieved upon monitoring operations performed by the application 215 and identifying one or more operations that are associated with a predefined configuration 260 of the user-input element 110. In one instance, the data store 220 may be interrogated with data related to the operations to determine whether the predefined configuration 260 corresponds thereto. Upon retrieving the predefined configuration 260, the configuration settings 250 may be drawn therefrom. In one embodiment, if the application 215 is an instant-messaging program, operations monitored by the processing unit 205 may indicate that the application 215 will enter a text-entry mode. Subsequently, the data store 220 is searched for an appropriate predefined configuration 260 that supports the text-entry mode. Accordingly, in this embodiment, the configuration settings 250, which may be a command to the electromechanical device 210 to adjust the user-input elements 110 to replicate a physically-extending keypad, are extracted from characteristics of the appropriate predefined configuration 260. In a variation of this example, the replication of the physically-extending keypad may be an alphanumeric.

[0041] In a second example, the request 230 may be a user-initiated actuation 275 from a user, entered at the flexible touchpad 115, to dial a phone number or to create an email message. In this example, the flexible touchpad 115 may be a resistive touchscreen and entering the request 230 may be an actuation at the resistive touchscreen by a user's finger or stylus. Accordingly, the configuration settings 250 may be a command to the electromechanical device 210 to adjust the user-input elements 110 to express a dial pad or a keyboard, respectively.

[0042] In a third example, the request may be created upon receiving an indication of actuation 235 from the user-input elements 110 in the active condition. In one particular instance, a user-initiated input via one or more of the set of moveable pins, which comprise the user-input elements, is detected. This detected input is identified as being associated with a predefined configuration 260 of the user-input elements 110. If the predefined configuration 260 is distinct from the present configuration of the user-input elements 110, configuration settings 250 are generated. Accordingly, in this example, the configuration settings 250 may be derived from the indication of actuation 235 (e.g., typing on the physically-extending keypad), or characteristics of the predefined configuration 260, and provided to the electromechanical device 210 to adjust the physical state and/or mode of the user-input elements 110.

[0043] Upon receiving the request 225 or 230, or request based on the indication of actuation 235, the processing unit 205 may process the request to determine configuration settings 250, as discussed above. In one instance, processing the request 225, 230, or 235 includes determining whether manipulating the positional state or mode (e.g., physically-extending keypad) of the user-input elements 110 is appropriate to address the request 225, 230, or 235. By way of example, the request 225, 230, or 235 may be an indication to enter text, dialing a number, entering an application (e.g., application 215) that uses a similar configuration of the user-input elements 110 as is presently employed, or any other

input that does not trigger an adjustment to the positional state or mode of the user-input elements 110. Alternatively, the request 225, 230, or 235 may be an indication to launch a new application that corresponds to an input interface that is not presently configured on the flexible touchpad 115. In this example, the processing unit 205 will provide an indication, in the form of configuration settings 250, to the electromechanical device 210 to manipulate the user-input elements 110. It should be appreciated and understood that the configuration settings 250 may be derived from the request 225, 230, or 235 itself, generated in accordance with characteristics of the predefined configuration 260 as identified by the request 225, 230, or 235, or produced in any other fashion to accurately represent aspects of the request 225, 230, or 235 related to manipulation of the user-input elements 110.

[0044] In addition to accessing or generating the configuration settings 250 and conveying them to electromechanical device 210, the manipulation procedure executed by the processing unit 205 may include extracting presentation data 285 from the request 225 or 235. The presentation data 285, as more fully discussed above, is display-based information that is communicated to the flexible touchpad 115. Accordingly, upon receipt of the presentation data 285, the flexible touchpad 115 may render a UI display 120 that is partially controlled by the presentation data 285. By way of example, the presentation data 285 may direct the flexible touchpad 115 to present alphanumeric characters at the UI display 120 in the pattern of a keyboard, dial pad, and the like. These alphanumeric characters may be displayed in association with outwardly-extending protrusions 125 expressed at the flexible touchpad 115. Accordingly, the alphanumeric characters identify the function of each "key" that is generated by the outwardly-extending protrusions 125 (see FIGS. 5-7). Further, the alphanumeric characters may assist a user in selecting appropriate areas of the flexible touchpad to actuate by visually indicating which user-input elements 110 are in an active condition. In an exemplary embodiment, the alphanumeric characters are rendered at the UI display 120 in a special format such that they are readable on a deformed surface of the flexible touchpad 115, where the deformed surface is a result of the outwardly-extending protrusions 125.

[0045] Generally, the electromechanical device 210 is configured to manipulate all, or a portion, of the user-input elements 110 to an extended orientation 116, a retracted orientation, a partially extended orientation, and the like. Typically, the user-input elements 110 are adjusted in a manner consistent with instructions within the configuration settings 250. Accordingly, the adjustment affects the outwardly-extending protrusions 125 expressed at the flexible touchpad 115. In other embodiments, the electromechanical device 210 is adapted to enable or disable sensing devices coupled to the user-input elements 110, thereby adjusting the user-input elements 110 between an active condition and an idle condition.

[0046] In a first embodiment, the electromechanical device 210 is an apparatus that employs extension components (e.g., compression springs, compressible materials, and the like) and retaining components (e.g., locking mechanisms, magnets) to manipulate the positional state of each of the user-input elements. In operation, the retaining components may release a portion of the user-input elements 110 such that the extension components are free to adjust the positional state of the portion to an extended orientation 116. This portion of user-input elements 110 in the extended orientation 116 may